

# Work Order ID 65650

January 21, 2011 10:55:20 AM



Page 1

Item ID: D4185-1

Accept



Setup Start



Revision ID: PRELIM

Item Name: Internal Bellcrank

Stop



Start Date: 1/21/11 Start Qty: 2.00



Cust Item ID:

Required Date: 2/04/11 Req'd Qty: 2.00

Customer:

Reference:

Approvals: Process Plan: CL

Date: 11/01/21

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4185

PAT

PA3

11-01-28

100

0.00



Bandsaw

Jeaspa Bandsaw

Memo

CUT BLANK 3.188" LONG

0.00

only 11/02/09

2 5

110

0.00



HAAS I

HAAS CNC vertical machine #1

Memo

MILL AS PER DWG AND FOLIO FB017

FOLIO REV: AA

DWG REV: PA3

2-DEBURR

0.00

M.A 11/02/14

2 0

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY



PRELIMINARY ISSUE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 65650



Page 2

January 21, 2011 10:55:20 AM

Item ID:	D4185-1	Accept		Setup	Start	
Revision ID:	PRELIM				Stop	
Item Name:	Internal Bellcrank					
Start Date:	1/21/11	Start Qty: 2.00		Cust Item ID:		
Required Date:	2/04/11	Req'd Qty: 2.00		Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120  QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo	0.00 0.00	BA	11/02/14		2	0		
130  QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 0.00		11/02/22		2	0		
140  Packaging Packaging	Identify as per dwg & Stock Location: <i>Prel Shelf</i>  Memo	0.00 0.00		<i>11-03-02</i>		2	0		
				<i>w/o 66224 EL 11-3-7</i>					<i>(2)</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 65650**

January 21, 2011 10:55:20 AM

Page 3

Item ID: D4185-1

Accept

Revision ID: PRELIM

Item Name: Internal Bellcrank

Start Date: 1/21/11 Start Qty: 2.00

Required Date: 2/04/11 Req'd Qty: 2.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

PL 1106-9  
(2)

POSITIVE RECALL

EFFECTIVE Feb 21 AUTH LC

RELEASED \_\_\_\_\_ DATE \_\_\_\_\_

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 1

January 21, 2011 10:55:19 AM

Work Order ID: 65650

Parent Item: D4185-1

Parent Item Name: Internal Bellcrank



Start Date: 1/21/11

Required Date: 2/04/11

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 11-01-20 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.500X2.500		Purchased	No				f	56.2450		0.56			
304 BAR .500 x 2.50													

Location	Loc Qty	Loc Code
MAT	13.3	
111330	0	
116135	13.3	
MAT53	42.945	
111330	0.2375	
112320	6.7575	
112697	3.85	
→ 112764	32.1	

.56. and 11/02/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 65650
<b>Description:</b> INTERNAL BELL CRANK		<b>Part Number:</b> D4185-1
<b>Inspection Dwg:</b> D4185 , <b>Rev:</b> PA3 PA3 <i>11/02/02</i>		<b>Page 1 of 12</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☒ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.025x45°	+/- .010	0.027x45°	✓		Vern	GA-01
0.20	+/- .030	0.201	✓		"	"
2.24	+/- .030	2.245	✓		"	"
2.64	+/- .030	2.638	✓		H-G	31006
1.95	+/- .030	1.950	✓		"	"
1.74	+/- .030	1.737	✓		"	"
1.54	+/- .030	1.537	✓		"	"
1.41	+/- .030	1.415	✓		"	"
0.85	+/- .030	0.850	✓		Vern	GA-01
0.74	+/- .030	0.742	✓		H-G	31006
0.78	+/- .030	0.782	✓		Vern	GA-01
φ 0.373	+0.001/-0.000	φ 0.3730	✓		Mic	GA-03
155°	+/- 1/2°	155°	✓		Angle Meter	CNC-03
0.26	+/- .030	0.262	✓		Vern	GA-01
0.29	+/- .030	0.292	✓		H-G	31006
0.53	+/- .030	0.530	✓		Vern	GA-01
0.93	+/- .030	0.935	✓		"	"
φ 0.125	+0.004/- .001	φ 0.125	✓		"	"
0.18	+/- .030	0.181	✓		"	"
R 0.50	+/- .030	R 0.500	✓		R-G	ref
R 0.06	+/- .030	R 0.060	✓		"	"
R 0.13	+/- .030	R 0.125	✓		"	"
0.24	+/- .030	0.2410	✓		Vern	GA-01

<b>Measured by:</b> B.A
<b>Date:</b> 11/02/14

<b>Audited by:</b> <i>Am</i>
<b>Date:</b> 11/02/22

<b>Prototype Approval:</b>
<b>Date:</b>

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

## FIRST ARTICLE INSPECTION CHECKLIST

**X**

**x**



## Receiving Report

Date: 9/9/24  
 Supplier: MAGNA

Batch No: M112749  
 Dart P/O: 10386

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒ N/A ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection ☒ N/A ☒  
 Work Order 610769

Discrepancies						
Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12

Production/Admin: 9/9/24  
 Date:    
 Received/Costing:    
 Initial:  

Location



# Magna Stainless

5775 Kieran St, Saint-Laurent QC H4S 0A3  
Phone: (514) 339-1211 Watts: 1-800-363-6646 Fax: (514) 339-1105

## INVOICE

Pg 1 of 1 1017090

RECEIVED

OCT 05 2009

SOLD TO:

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY ON  
K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY ON  
K6A 1K7

MTR: Y

INVOICE DATE:	09/24/09
ORDER DATE:	09/21/09
SHIP DATE:	09/24/09
ORDER NUMBER:	W018706
PURCHASE ORDER:	10386

Currency		Sales Person		Ship Via		F.O.B.		Terms	
CANADIAN DOLLARS		ERYCK BLAIS		NIR: R-557065-1		PREPAID		NET 30 DAYS	
Ln	Back Ordered	Ordered	Unit	Description		Shipped		Price Per	Value
		4	PC	STAINLESS FLATS SPL 304 HR 1/2" x 2-1/2" x R/L L031497 12'11" 4 PC/222 LB		4 UN		180.00	720.00

09/25/09 13:26:34

Merchandise:	720.00
Surcharges:	
No Tax Costs:	
GST	36.00
Total Due:	756.00

Title to the goods sent out on this invoice remains with Magna Stainless Div of CSMULC until such time as this invoice has been paid in full. Unless otherwise noted terms are 30 days. Interest accrues on all overdue accounts at the rate of 1.5% per month compounded monthly.

Q.S.T. # 1213236471  
G.S.T. # 881565899 RT0001

**Magna Stainless**

5775 Kieran St, Saint-Laurent QC H4S 0A3  
Phone: (514) 339-1211 Watts: 1-800-363-6648 Fax: (514) 339-1105

**INVOICE**

Pg 1 of 1 T017098

RECEIVED

OCT 05 2009

SOLD TO:

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY , ON  
K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY , ON  
K6A 1K7

MTR:Y

INVOICE DATE:	09/24/09
ORDER DATE:	09/14/09
SHIP DATE:	09/24/09
ORDER NUMBER:	W018319
PURCHASE ORDER:	PO10386

Currency	Sales Person	Ship Via	F.O.B.	Terms
CANADIAN DOLLARS	ERYCK BLAIS	NIR:R-557065-1	PREPAID	NET 30 DAYS

Ln	Back Ordered	Ordered	Unit	Description	Shipped	Price Per	Value
				ALUMINUM - LB			
		1	PC	6061-T6 1/8" X 2 1/2" X 144" L031466 1 PC/5 LB	1 UN	92.00	92.00
		2	PC	6061-T6 1/2" X 10" X 144" L031467 2 PC/146 LB	2 UN	220.00	440.00
		2	PC	6061-T6 2" X 3 1/2" X 144" L031468 2 PC/202 LB	2 UN	310.00	620.00

09/25/09 13:26:36

Merchandise:	1,152.00
Surcharges:	
No Tax Costs:	
GST	57.60
Total Due:	1,209.60

Title to the goods sent out on this invoice remains with Magna Stainless Div of CSM ULC until such time as this invoice has been paid in full. Unless otherwise noted terms are 30 days. Interest accrues on all overdue accounts at the rate of 1.5% per month compounded monthly.

Q.S.T. # 1213236471  
G.S.T. # 881565899 RT0001

# PACKING LIST

\*\*REPRINT\*\*

I017090

Page: 1 of 1

SOLD TO:  
 DART AEROSPACE LTD  
 1270 ABERDEEN STREET

SHIP TO:  
 DART AEROSPACE LTD  
 1270 ABERDEEN STREET

HAWKESBURY, ON  
 K6A 1K7  
 Contact: CHANTASL

HAWKESBURY, ON  
 K6A 1K7  
 Ship Terms: PREPAID

ASA#

MAGNA  
 NTRO2

SPECIAL INSTRUCTIONS

Currency		Sales Person		Customer Phone	Customer Fax	Customer PO	
CANADIAN DOLLARS		ERYCK BLAIS		(613) 632-5200	(613) 632-1053	10386	
Sales Order	Terms		Ship Via		Date Ordered	Date Required	Date Shipped
W018706	NET 30 DAYS		NIR:R-557065-1		09/21/09	09/24/09	09/24/09
Ordered	Back Ordered	Low					

Ordered	Back Ordered	Unit	Description	Bundle #	Heat #	Shipped
4		PC	STAINLESS FLATS SFL 304 HR 1/2" x 2-1/2" x R/L 12'11" 222 LB / 4 PC	L031497	245179	4
Bundles: 1				Total Weight:	222 LB	

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577

\*\*\*OUTSTANDING PO REPRINT\*\*\*

Purchase Order ID PO10386

Purchase Order Date 9/10/09

PO Print Date 9/24/09

Page Number 1 of 2

Order From :

VC-MAG002

MAGNA STAINLESS  
5775 RUE KIERAN  
ST LAURENT, QC H4S 0A3  
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	800 363 6646	Requisition Nbr	
Vendor Fax	514 339 1105	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty	Unit Price	Extended Price
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Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
5	M6061T6B0.125X2.500	6061T6 BAR .125 X 2.50	9/18/09 Yes	✓ 12.00 f	Yours ppd	\$7.6600	\$91.92

Special Instr: MAT: 6061-T6/T651/T6510/T6511/T62  
ALUMINUM BAR  
SPEC: QC-A-225/8 OR AMS-QC-A-  
225/8 (OR AMS 4117/4128/4115/4116)  
OR QC-A-200/8 OR AMS-QQ-A-200/8  
(OR AMS 4160) OR ASTM B211 OR  
ASTM B221

Line Total:

\$91.92

6	M6061T6B0.500X10.000	6061-T6 Bar .500 x 10.00	9/18/09 Yes	✓ 24.00 f	Yours ppd	\$18.3300	\$439.92
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9/17/24

REFERENCE ONLY

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

9/24/09

CL



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577

\*\*\*OUTSTANDING PO REPRINT\*\*\*

Purchase Order ID PO10386  
Purchase Order Date 9/10/09  
PO Print Date 9/24/09

Page Number 2 of 2

Order From : VC-MAG002  
MAGNA STAINLESS  
5775 RUE KIERAN  
ST LAURENT, QC H4S 0A3  
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	800 363 6646	Requisition Nbr	
Vendor Fax	514 339 1105	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty	Unit Price	Extended Price
		Special Inst:	SAME AS ABOVE		Line Total:	\$439.92
7	M6061T6B2.000X03.500	6061-T6 Bar 2.00 x 3.50	9/18/09 Yes	24.00	Yours ppd \$25.8300	\$619.92
		Special Inst:	SAME AS ABOVE		Line Total:	\$619.92
8	A1304130.500X2.500	304 BAR .500 x 2.50	9/10/09 Yes	47.90	Yours ppd \$15.0000	\$718.50
		Special Inst:	MAT: AISI 304/316 STAINLESS STEEL BAR (NOTE: AISI 303 NOT APPLICABLE)		Line Total:	\$718.50

Outstanding PO Total: \$1,870.26

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

REFERENCE ONLY

Change Nbr: 4

Change Date: 9/24/09

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

P006739-20206240

**sapa:** Sapa Industrial Extrusions  
53 POTTSVILLE STREET

CRESSONA, PA  
17929-0187

Sapa Extrusions Inc., a Subsidiary of Sapa AB

Invoice To Customer

Ship To Customer

## Certified Inspection Report

Sales Order Number	Line No.	Customer P/O	Cert Number	Page
110072649	3	P90608C021-3	SAPA89183	1 of 2
			Cert Creation Date	Cert Print Date
			16-JUL-09	16-JUL-09

Quantity Shipped	Date Shipped	Item Description
2242 LB	16-JUL-09	Extruded Rectangular Bar 0.125 TK x 2.5 W 144 IN LN
B/L	Item No.	6061 / T6511
59905	G03361057	ETN M-MILL
Delivery Id	Item No. Rev	W/F 0.367 F 14 CS 2.5
4029113		Marking CONTINUOUS
Customer Part No.		ASTM B221 REV 08
125X2.5		UNS#A96061 REV
		AMS-QQ-A-200/6 REV

Applicable Specifications, Revisions and Exceptions

Certificate in accordance with EN10204 3.1

COMPOSITION NOTE: The values for 'Others Each' and 'Others Total' have met the limits as shown on this certified inspection report. Remainder is Aluminum.

### Legal Statement

We hereby certify that, unless otherwise indicated, the material covered by this report has been manufactured, inspected, and tested in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition and had the mechanical properties shown on the face of this certification. Also, note that mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product. This certification is not to be reproduced in partial form without prior written approval of our Quality Assurance Dept.

Signature And Title

*Dave A. Lukasz*

Dave A. Lukasz

Tech/Quality Manager

16-JUL-09

### Quantities per Lot / Packages

Package Number	Lot Number	Quantity	UOM	Weight	
				Gross	Net
G12-PKG1084499	20206240	258	PCS	1129	1121
G12-PKG1084500	20206240	258	PCS	1129	1121

### Composition Limits

Alloy	Si		Fe		Cu		Mn		Mg		Cr		Zn	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
6061	0.40	0.8	—	0.7	0.15	0.40	—	0.15	0.8	12	0.04	0.35	—	0.25

Inc 09-21-09

S0031406001-1 MAGNA STAINLESS PO: P006739 Part 1:

1.00PC

S  
09/09/05

**sapa:** Sapa Industrial Extrusions  
53 POTTSVILLE STREET

CRESSONA, PA  
17929-0187

## Certified Inspection Report

Sales Order Number  
1100072649

Line No.  
3

Customer P/O  
P90608C0021-3

Cert Number

SAPA891E3

Page

Page 2 of 2

Cert Creation Date

16-JUL-09

Cert Print Date

16-JUL-09

Alloy	Ti		Bt		Pb		Others Each		Others Total	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
6061	---	0.15	---	---	---	---	---	0.05	---	0.15

### Composition Results

Spec / Cast	Si	Pb	Cu	Mn	Mg	Cr	Zn	Ti	BI	Pb	Others Each	Others Total
5021323	0.7	0.24	0.28	0.04	0.9	0.06	0.04	0.01	---	---	---	---

### Mechanical Property - Test Limits

Test Type		UTS - L		TYS - L		EL. 4D-Long	
UOM		KSI		KSI		PCT	
# of Test		---		---		---	
Test Temp	Lot Number	# of Tests	Min Value	Max Value	Min Value	Max Value	Min Value
T6511	20206240	3	45.3	44.8	39.8	41.2	12.2
							12.7

### Cert Notes

Products manufactured with a T6511 temper also meet T6 temper requirements.

Yield strength has been determined by the 0.2% offset method

All Alloys Produced at Sapa Industrial Extrusions comply with 0.4% Maximum Lead per RoHS, with the exception of 6262 alloy  
Made in USA

JUL 17 2009

BY *Kathy Bell*

KATHY BELL, CERTIFICATION PROCESSOR

Inc 09-21-09

SP0014G0001-1 MAGNA STAINLESS PO: P006739 Part #:

1.00PC

2006739-2045992

**sapa:** Sapa Industrial Extrusions  
53 POTTSVILLE STREET

CRESSONA, PA  
17929-0187

Sapa Extrusions Inc., a Subsidiary of Sapa AB

Invoice To Customer

Ship To Customer

## Certified Inspection Report

Sales Order Number	Line No.	Customer ZPO
1100096128	2	P90810CG002-2

Cert Number	Page
SAPA102563	1 of 3
Cert Creation Date	Cert Print Date
12-AUG-09	12-AUG-09

Quantity Shipped	Date Shipped	Item Description
4930 LB	12-AUG-09	Extruded ECON-O-PLATE 0.500 TH x 10.000 W SECT 505025 144.000 IN LN 6061 / T6511 FIN M-MILL
B/L	Item No.	W/F 5.860 F 04 CS 10
67087	G03360698	Marking CONTINUOUS: ASTMB221-REV 03
Delivery Id	Item No. Rev	AMS-QQ-A-200/8 REV ASMESB221 REV 99
4037119		UNSA96061 REV
Customer Part No.		
5X10		

### Applicable Specifications, Revisions and Exceptions

Certificate in accordance with EN10204 3.1

COMPOSITION NOTE: The values for 'Others Each' and 'Others Total' have met the limits as shown on this certified inspection report. Remainder is Aluminum.

### Legal Statement

We hereby certify that, unless otherwise indicated, the material covered by this report has been manufactured, inspected, and tested in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition and had the mechanical properties shown on the face of this certification. Also, note that mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product. This certification is not to be reproduced in partial form without prior written approval of our Quality Assurance Dept.

### Signature And Title

*David A. Lukasz*

David A. Lukasz

12-AUG-09

Tech/Quality Manager

### Quantities per Lot / Packages

Package Number	Lot Number	Quantity	UOM	Weight	
				Gross	Net
G12-PKG1087367	20231651	14	PCS	996	990
G12-PKG1095929	20245992				
G12-PKG1095929	20245992	14	PCS	991	985
G12-PKG1095930	20245992	14	PCS	991	985
G12-PKG1095941	20245992				
G12-PKG1095941	20245992	14	PCS	991	985
G12-PKG1095948	20245992	14	PCS	991	985
G12-PKG1095948	20245992				

Inc 09-21-09

S909140G001-2 MAGNIA STAINLESS PO: P006739 Part 8:  
2.00PC 146.0018

807/09/05

*[Handwritten mark]*



SERVICE CENTER METALS  
5850 Quality Way  
Prince George, VA 23875

# CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

P006734-200909862

BILL TO

SHIP TO

MANIFEST NUMBER

86672

DIE NUMBER

MRB0481

DATE OF SHIPMENT

8/13/2009

CUSTOMER PO

P90716CG001 CT

ALLOY / TEMPER

6061-T6511

SALESPERSON

David Schroeder

CUSTOMER PART NUMBER

MRB0481

DESCRIPTION

MQRB 2.000x3.500 /

OUR ORDER NUMBER

909662

ITEM

27

CERTIFICATION

ASTM-B221-08 Stencil

SPECIFICATION

AMS-QQA-200/8

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA from ingot melted and cast in the United States or Canada.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

## Mechanical Properties

Lot No.	Test No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
200909862	1	08/11/09	54.3	48.0	19.5

S  
08/10/09

BY *melissa gagner*  
MELISSA GAGNER CERTIFICATION PROCESSOR

## Chemical Composition for Alloy 6061

Alloy		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other	Each	Total	Al	Melted In
6061	Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15		Remainder	
	Min	0.40	-	0.15	-	0.8	0.04	-	-	-	-	-		

United States of America

Rev. 9/26/07 - UMS

Print Date: 8/13/2009

*Robert M. Ramage*  
Robert M. Ramage Ph.D, Director of Quality & Technical Services

Inc 09-21-09

99091406001-3 MAGNA STAINLESS PO: P006739 Part #: 2.00PC 202.001B

**sapa** Sapa Industrial Extrusions  
53 POTTSVILLE STREET

CRESSONA, PA  
17928-0187

## Certified Inspection Report

Sales Order Number  
1100996128

Line No.  
2

Customer P/O  
P90810CG002-2

Cert Number  
SAPA102563

Cert Creation Date  
12-AUG-09

Page  
Page 2 of 3

Cert Print Date  
12-AUG-09

### Composition Limits

Alloy	Si		Fe		Cu		Mn		Mg		Cr		Zn	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
6061	0.40	0.8	—	0.7	0.15	0.40	—	0.15	0.8	1.2	0.04	0.35	—	0.25
Alloy	Ti		Pb		Po		Others Each		Others Total					
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
6061	—	0.15	—	—	—	—	—	0.05	—	0.15				

### Composition Results

Heat / Cast	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Po	Others Each	Others Total
S021479	0.7	0.30	0.29	0.04	0.9	0.04	0.06	0.02	—	—	—	—
Heat / Cast	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Po	Others Each	Others Total
S021598	0.6	0.27	0.25	0.03	0.9	0.05	0.06	0.02	—	—	—	—

### Mechanical Property - Test Limits

Test Type			UTS - L		TYS - L		EL 4D-Long	
UOM			KSI		KSI		PCT	
# of Test			—		—		—	
Test Temper	Lot Number	# of Tests	MIN Value	MAX Value	MIN Value	MAX Value	MIN Value	MAX Value
T6511	2024651	2	44.4	45.5	39.9	42.4	18.8	20.1
Test Type			UTS - L		TYS - L		EL 4D-Long	
UOM			KSI		KSI		PCT	
# of Test			—		—		—	
Test Temper	Lot Number	# of Tests	MIN Value	MAX Value	MIN Value	MAX Value	MIN Value	MAX Value
T6511	20245992	2	44.5	46.6	40.5	42.5	18.9	20.2

### Cert Notes

Products manufactured with a T6511 temper also meet T6 temper requirements.  
Yield strength has been determined by the 0.2% offset method

Inc 09-21-09

8/09/09/05

S90914DC001-2 304/304 STAINLESS PO: P006739 Part #:  
2.00PC 146.00LB

**Sapa:**Sapa Industrial Extrusions  
53 POTTSVILLE STREETCRESSONA, PA  
17929-0137**Certified Inspection Report**

Sales Order Number		Customer PO	Cert Number	Page
1100096125		P90810CG002.1	SAPA102563	3 of 3
Line No.	2		Cert Creation Date	Cert Print Date
			12-AUG-09	12-AUG-09

All Alloys Produced at Sapa Industrial Extrusions comply with 0.4% Maximum Lead per RoHS, with the exception of 6262 alloy  
Made in USA.

AUG 13 2009

BY *Melissa Gagner*  
MELISSA GAGNER CERTIFICATION PROCESSOR

Inc 09-21-09

S90314DG001-2 MAGNA STAINLESS PO: P006739 Part #:  
2.00PC 146.00LB

# Acciaierie Valbruna S.p.A.



36100 VICENZA (Italia) - Viale della scienza, 25 z.l.  
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliente / Besteller/Kunde  
VALBRUNA CANADA LTD  
8724 HOLGATE CRESCENT  
CON-MILTON, ONT L5T 5Z1-CAN

Produttore: ACCIAIERIE VALBRUNA S.P.A.  
Hersteller/Produzierendes Unternehmen

Oggetto Prove: Descaled Annealed Hotrolled  
Prüfgegenstand/Item inspected/Prüfung

Avviso di Spedizione: D-VI08014292  
Lieferanten/Packing Invoice

Ordine nr: 805001970 STOCK  
Bestell/Nr order/Commande

Tipo di Elaborazione: E+AOD  
Erschmelzungs-/Schmelzprozess/Verfahren

## CERTIFICATO DI COLLAUDO ABNAHMEPRUEFZEUGNIS INSPECTION CERTIFICATE CERTIFICAT DE RECEPTION EN 10204 (2005) , 3.1

Certificato nr: MEST632454/2008/  
Prüfung/Erst/Exam

Conferma ordine nr: E100008070  
Werkorder/Order/Ref. nr.

Marchio di Fabbrica:  
Zeichen des Lieferwerkes  
Trace mark  
Bleibende Marke

Punzone del Collaudatore:  
Stempel des Werkssachverständigen  
Inspector's stamp/Prüfer des Insasseurs

72715



### Specifiche:

Anforderungen / Requirements / Exigences

VAL CANADA 2 304/304L A  
ASME SA182 2007 S30400/03 6  
ASME SA479 2007 S30400/03 3  
ASTM A262 2002A PRACTICE E  
ASTM A320 2007A B8  
NACE MR0175 2003 S30400/03 A 6  
(3) SEC.II PT.A 2007 EDITION  
(1) SEC.II PT.A 2007 EDITION  
(3) SEC.II PT.A 2007 EDITION  
(5) \* ISO 15156-3

AMS 5639 H S30400  
ASME SA193 2007 B8 1  
ASTM A182 2007A S30400/03 4  
ASTM A276 2006 S30400/03  
ASTM A479 2006A S30400/03  
QQ-S-763 F 304/304L

0Chemical analysis only.  
2SEC.II PT.A 2007 EDITION  
4Chemical analysis only.

AMS 5647 H S30403  
ASME SA320 2007 B8 (2)  
ASTM A193 2007 B8  
ASTM A314 97 S30400/03  
MIL-S-862 B/1 304/304L

Qualität: T-304L  
Werkstoff/Grade/Qualität

Marca: AISI

Werkstoffbezeichnung/Brandname

Punzonatura: T-304L  
Kennzeichnung/Marking/Markierung

Pos. nr. Pos. nr. Nr. de pos.	Oggetto Gegenstand Friedict description Beschp. du produit	Dimensioni - in Abmessungen Dimensions Dimension	Tolleranza Tolérance Allowance Tolérance	Lunghezza - Ft Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn. Lot nr. Lot nr.
0040	Flat	2.5000 x 0.5000	484-06B	12 / 13	245179		3.104	707600210

Sono state soddisfatte tutte le condizioni richieste  
Die gestellten Anforderungen sind in. Anlage erfüllt  
The material has been furnished in accordance with the requirements  
Le matériel a été fourni conforme aux exigences

Controllo antimescolanza: OK  
Vorwischungsprüfung: zufriedenstellend durchgeführt  
Anterling testing performed: OK  
Contrôle antimeslange fait: o.k.

Controllo visivo e dimensionale: soddisfatta le esigenze  
Betrachtung und Ausmessung: ohne Beanstandung  
Visual inspection and dimensional check: satisfactory  
Contrôle visuel et dimensionnel: satisfaisant

TEST	Prova/Vorprobe Gegenprüfung Longitudinal Stress Quile Stress Wucht Zern, Torsion Läng. Zern, Torsion mm	F	Posit. Seigro Ausgang Seigro (1)	Sneramento Sneramento Yield Stress Yield Stress Yield Stress Rp 0,2% k.s.i.	Sneramento Sneramento Yield Stress Yield Stress Yield Stress Rp 0,2% k.s.i.	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm k.s.i.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Bruchdehnung Reduction in area Striction RA %	Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Hardness Dureté HB
Valori richiesti 1 Anforderungen/Prüfungswerte Valeurs de référence		min max		30		75 115	40	50		140 223
A	12,5	68	L	47		91	58	67		179

(L=Longitudinallänge, Q=Querschnitt, T=Temperaturtemperatur)

Grain size for ASTM E112

5

### Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata - Heat Schmelze/Heat	min - max 0,030	1,00	2,00	16,00 20,00	1,00	1,00	8,00 10,50	0,040	0,020	0,100				
C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %				
245179	0,020	0,42	1,67	16,10	0,54	0,48	8,22	0,100	0,031	0,029	0,081			

Produced without class I-II Ozone depleting substances.

Solution heat treated free from continuous carbide network.

Annealing temperature: 1940°F for 0.5 h/water.

Micro and macro etch test: OK

Intergranular corrosion test per ASTM A262 pract. E: ok.

Material is OFARS Compliant

Meltd and manufactured in Italy No welding or weld repair Material free from Mercury or radio-activity contamination

The Quality Management System is Certified acc. Pressure Equipment Directive (97/23/EC) Annex 1, s. 4.3 by TÜV and LLOYD'S

Vicenza, 21/05/08 VCC008 (Mod. LCER)	Il collaudatore di stabilimento / der Werkssachverständige / Works inspector / L'agent d'usine M. Rizzotto	Pagina - 1 di 1
--	---	-----------------





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO10386

Purchase Order Date 9/10/09

PO Print Date 9/10/09

Page Number 1 of 3

Order From :

MAGNA STAINLESS  
5775 RUE KIERAN  
ST LAURENT, QC H4S 0A3  
CA

VC-MAG002



Contact Name

Vendor Phone 800 363 6646

Vendor Fax 514 339 1105

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6S.250	6061T6 SHEET .250	9/10/09 Yes	✓ 32.00 sf	Yours ppd 9/9/14	\$13.2800	\$424.96
		Special Inst:	MAT: 6061-T6/T62 ALUMINUM SHEET SPEC: QC-A-250/11 OR AMS-QC-A- 250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209				
2	M6061T6R0.625	6061-T6 Round Bar .625"	9/10/09 Yes	✓ 60.00 f	Yours ppd 9/9/14	\$0.8250	\$49.50
		Special Inst:	MAT: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR SPEC: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR QQ-A- 200/8 OR AMS-QQ-A-200/8 (OR AMS 4160) OR ASTM B211 OR ASTM B221				
3	M6061T6R0.750	6061-T6 Round Bar .750"	9/10/09 Yes	✓ 60.00 f	Yours ppd 9/9/14	\$1.2000	\$72.00
		Special Inst:	SAME AS ABOVE				

MATERIAL CERTIFICATION

REQ'D UPON DELIVERY

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 3

Change Date: 9/10/09



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO10386

Purchase Order Date 9/10/09

PO Print Date 9/10/09

Page Number 2 of 3

Order From :

VC-MAG002

MAGNA STAINLESS  
5775 RUE KIERAN  
ST LAURENT, QC H4S 0A3  
CA

Contact Name

Vendor Phone 800 363 6646

Vendor Fax 514 339 1105

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

10127-2607

Net 30

CAD

4	M6061T6R1.125	6061 ROUND BAR 1.125	9/10/09	12.00	Yours ppd	\$41.600	\$49.92
			Yes	f			

Special Inst: SAME AS ABOVE

5	M6061T6B0.125X2.500	6061T6 BAR .125 X 2.50	9/18/09	✓ 12.00	Yours ppd	\$7.6600	\$91.92
			Yes	f			

Special Inst: MAT: 6061-T6/T651/T6510/T6511/T62  
ALUMINUM BAR  
SPEC: QC-A-225/8 OR AMS-QC-A-225/8  
(OR AMS 4117/4128/4115/4116) OR QC-A-  
200/8 OR AMS-QQ-A-200/8 (OR AMS  
4160) OR ASTM B211 OR ASTM B221

6	M6061T6B0.500X01.000	6061-T6 Bar .500 x 1.00	9/18/09	24.00	Yours ppd	\$18.3300	\$439.92
			Yes	f			

Special Inst: SAME AS ABOVE

7	M6061T6B2.000X03.500	6061-T6 Bar 2.00 x 3.50	9/18/09	✓ 24.00	Yours ppd	\$25.8300	\$619.92
			Yes	f			

Special Inst: SAME AS ABOVE

8	M304B0.500X2.500	304 BAR .500 x 2.50	9/10/09	60.00	Yours ppd	\$15.0000	\$900.00
			Yes	f			

Special Inst: MAT: AISI 304/316 STAINLESS STEEL  
BAR (NOTE: AISI 303 NOT APPLICABLE)

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 3

Change Date: 9/10/09



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO10386

Purchase Order Date 9/10/09

PO Print Date 9/10/09

Page Number 3 of 3

Order From :

VC-MAG002

MAGNA STAINLESS  
5775 RUE KIERAN  
ST LAURENT, QC H4S 0A3  
CA

Contact Name

Vendor Phone 800 363 6646

Vendor Fax 514 339 1105

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

9	M304B0.750X2.500	304 BAR .750 X 2.50	9/10/09 Yes	48.00	Yours ppd	\$27.9200	\$1,340.16
---	------------------	---------------------	----------------	-------	-----------	-----------	------------

Special Inst: SAME AS ABOVE

10	M304S11GA	304/316 0.125 Sheet	9/10/09 Yes	✓ 128.00 sf	Yours ppd	\$10.4700	\$1,340.16
----	-----------	---------------------	----------------	----------------	-----------	-----------	------------

Special Inst: MAT: AISI 304/316 SS SHEET  
ANNEALED 28 FINISH  
SPEC: MIL-S-5059 OR AMS 5513(304) OR  
AMS 5524 (316) OR ASTM A240 OR  
ASME SA240

PO Total:

\$5,328.46

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

Change Nbr: 3

Change Date: 9/10/09

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable



**Magna Stainless**  
 5775 Kieran St, Saint-Laurent, Quebec H4S 0A3  
 Phone: (514) 339-1211 Watts: 1-800-363-6646 Fax: (514) 339-1105

# PACKING LIST

\*\*REPRINT\*\*

I017098

Page: 1 of 1

SOLD TO:  
 DART AEROSPACE LTD  
 1270 ABERDEEN STREET


SHIP TO:  
 DART AEROSPACE LTD  
 1270 ABERDEEN STREET

HAWKESBURY, ON  
 K6A 1K7  
 Contact: CHANTAL

HAWKESBURY, ON  
 K6A 1K7  
 Ship Terms: PREPAID

MTR:Y

SPECIAL INSTRUCTIONS

Currency		Sales Person		Customer Phone	Customer Fax	Customer PO	
CANADIAN DOLLARS		ERYCK BLAIS		(613) 632-5200	(613) 632-1053	PO10386	
Sales Order	Terms		Ship Via		Date Ordered	Date Required	Date Shipped
W018319	NET 30 DAYS 		NIR:R-557065-1		09/14/09	09/21/09	09/24/09

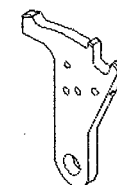
Ordered	Back Ordered	Unit	Description	Bundle #	Heat #	Shipped
1		PC	ALUMINUM - LB 6061-T6 1/8" X 2 1/2" X 144"			1
2		PC	5 LB / 1 PC 6061-T6 1/2" X 10" X 144"	L031466	20206240	1
2		PC	146 LB / 2 PC 6061-T6 2" X 3 1/2" X 144"	L031467	20245992	2
			202 LB / 2 PC	L031468	200909862	2
Bundles: 1				Total Weight:		353 LB

Received by: *P. Upton*

Date: 24/09/09

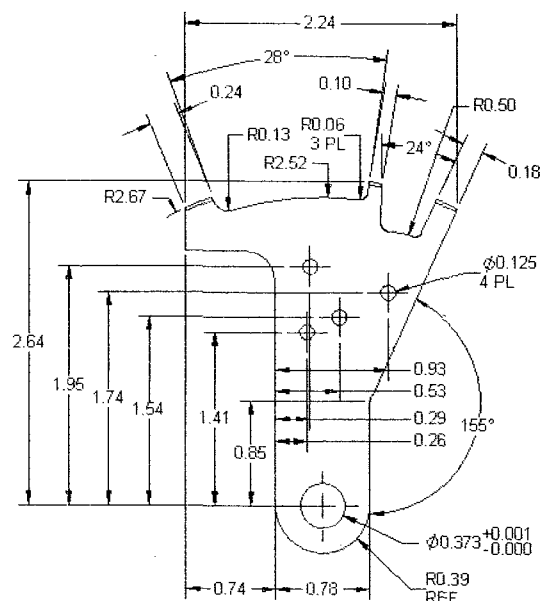
Signature: \_\_\_\_\_

w/o 65650



0.025 X 45°  
CHAMFER  
3 PL

0.20



$\phi 0.089 \times 0.55$  DP  
THREAD 4-40 UNC-3A

0.10

0.69

VIEW A-A

B4-3

B2-3





# D4185-1 INTERNAL BELLCRANK

PRELIMINARY ISSUE

10.11.12

## NOTES

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR  
PER ASTM A276  
REF DART SPEC M304B
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.16 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAMMERSBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA
MFG. APPR.		D4185	SHEET 2 OF
APPROVED		TITLE	SCALE
DE APPR.		INTERNAL BELLCRANK	NTS
DATE	10.11.12	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES OF THE PROJECT ONLY. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			